--Although the above discussed shape memory polymers are within the contemplation of the present invention, it is preferred that the shape memory polymer, employed in the formation of the contact lens of the present invention, be a new SMP, a copolymer of styrene and a vinyl compound other than styrene. This SMP is described in copending and concurrently filed application, ~~VTN-576~~ United States Application No. 10/056,590, which is incorporated herein by reference.--

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Please cancel claims 1 through 4,

Please amend claims 5, 6, 11, 14, 22 and 25.

Please add claims 27 through 36.

STATUS OF CLAIMS

1. Canceled.

2. Canceled.

3. Canceled.

4. Canceled.

5. (Currently amended.) An ophthalmic mold ~~in accordance with Claim 3 wherein said thermosetting~~ comprising a shape memory polymer that is a copolymer of styrene and a vinyl compound.

6. (Currently amended.) A mold in accordance with Claim ~~1~~ 5 comprising a first member and a second member.

7. (Original) A mold in accordance with Claim 6 wherein said mold is prepared in a press and said second member of said mold is formed in a shape of a base curve element and said first member is formed in the shape of a front curve element.

8. (Original) A mold in accordance with Claim 7 wherein said press includes a core element which interacts with said base curve element and said front curve element.

9. (Original) A mold in accordance with Claim 8 wherein said base curve element and said front curve element are formed of a metal and wherein said base curve and said front curve elements have an optical forming surface whose root mean square surface roughness is no more than about 20 nanometers.

10. (Original) A mold in accordance with Claim 7 wherein said core element is provided by gas pressure.

11. (Currently amended.) A mold in accordance with Claim ~~1~~ 5 wherein a mold half of said shape memory polymer mold is prepared in said press by the steps which comprise:

a) placing a preform of a shape memory polymer between a front curve or a base curve element and a core element;

b) heating said preform to a temperature at or above the glass transition temperature but below the decomposition temperature but below the decomposition temperature of said shape memory polymer;

c) a pressure sufficient to cause said shape memory polymer sheet to assume a shape of said front curve or base curve element;

d.) reducing the temperature of said formed shape memory polymer to below said glass transition temperature; and

e) removing said formed shape memory polymer from said coining press.

12. (Original) A mold in accordance with Claim 11 wherein said temperature in said step (d) is reduced to ambient.

13. (Original) A mold in accordance with Claim 11 wherein said preform is a sheet of said shape memory polymer is disposed in a holder prior to said step (a) and said formed shape memory polymer is removed from said holder subsequent to said step (e).

14. (Currently amended.) A mold in accordance with Claim ~~1~~ 5 further comprising one or more mold members wherein at least one mold member is prepared in an agile tool, comprising adjustment means that are used to shape said mold member.

15. (Original) A mold in accordance with Claim 14 wherein said adjustment means is a plurality or an array of concentric tubes and said agile tool further comprises a deformable molding surface.

16. (Original) A mold in accordance with Claim 14 wherein said actuator means is a plurality or an array of pins.

17. (Original) A mold in accordance with Claim 14 wherein said adjustment means is an array of heaters.

18. (Original) A mold in accordance with Claim 14 wherein said shape memory polymer halves are prepared in said agile tool by the steps which comprise:

a) contacting a sheet of a shape memory polymer between deformable molding surface, whose shape is defined by adjustment means, and a core element under a pressure sufficient to cause said shape memory polymer sheet to assume a shape of said front curve or base curve actuated surface at a temperature at or above the glass transition temperature but below the decomposition temperature of said shape memory polymer;

b) reducing the temperature of said formed shape memory polymer to below said glass transition temperature;

c) moving said core element out of contact with said sheet of said shape memory polymer; and

d) removing a contact lens mold half formed shape memory polymer from said agile tool.

19. (Original) A mold in accordance with Claim 18 wherein said sheet of said shape memory polymer is disposed in a holder prior to said step (a) and said formed shape memory polymer is removed from said holder subsequent to said step (d).

20. (Original) A mold in accordance with Claim 6 wherein at least one surface of at least one mold member is formed by gas pressure that presses the surface opposite said one surface against a surface of a press or agile tool.

21. (Original) A mold in accordance with Claim 20 wherein said surface of said agile tool is formed by a plurality of concentric tubes.

22. (Currently amended.) A mold in accordance with Claim ~~1~~ 5 wherein said mold is prepared by said by the steps which comprise:

a) disposing a sheet of a shape memory polymer upon an adjustment means, set to define a predetermined shape, said adjustment means being in a desired shape;

b) elevating the temperature of said sheet of said shape memory polymer to at least the glass transition temperature but below the decomposition temperature;

c) emitting a stream of gas at said sheet of said shape memory polymer at a pressure sufficient to cause a sheet of said shape memory polymer to form a shape of said actuator means;

d) reducing the temperature of said formed shape memory polymer to below said glass transition temperature

e) removing said formed shape memory polymer from atop said adjustment means.

23. (Original) A mold in accordance with Claim 26 wherein said stream of temperature in said step (d) is reduced to ambient.

24. (Original) A mold in accordance with Claim 22 including the step of creating a vacuum concurrent with step (c).

25. (Currently amended.) A mold in accordance with Claim ~~1~~ 5 that further comprises intrinsic actuators.

26. (Original) A mold in accordance with Claim 25, wherein said mold is prepared by the steps which comprise:

a.) compressing a preform with projections on one surface of said preform;

b.) actuating selected intrinsic actuators by heating said individual intrinsic actuators above the Tg of said intrinsic actuators; and

c.) cooling said intrinsic members.

27. (New) The mold of claim 5, wherein the vinyl compound is a compound other than styrene.

28. (New) The mold of claim 27, wherein the mold further comprises a multifunctional crosslinking agent.

29. (New) The mold of claim 28, wherein the mold further comprises a modifying polymer

30. (New) The mold of claim 5, wherein said vinyl compound is vinyl neodecanoate, vinyl benzoate, vinyl propionate, vinyl stearate, a methylstyrene, 4-(vinyloxy)butyl stearate or a vinyl pyridine.

31. (New) The mold of claim 29, wherein said vinyl compound is vinyl neodecanoate, vinyl benzoate, vinyl propionate, vinyl stearate, a methylstyrene, 4-(vinyloxy)butyl stearate or a vinyl pyridine.

32. (New) The mold of claim 28, wherein the crosslinking agent is difunctional.

33. (New) The mold of claim 32, wherein the crosslinking agent is divinyl benzene, bis(4-(vinyloxy)butyl)terephthalate or bis(4-(vinyloxy)methyl)cyclohexyl)methyl terephthalate.

34. (New) The mold of claim 29, wherein said modifying polymer is a thermoplastic polymer compatible with said polymer formed by the reaction product of said styrene andsaid vinyl compound.

35. (New) The mold of claim 32, wherein said vinyl compound is a vinyl neodecanoate and said difunctional crosslinking agent is divinyl benzene.

36. (New) An ophthalmic mold comprising a shape memory polymer reaction mixture comprising about 30 to about 95 percent styrene, about 5 to about 60 percent vinyl compound, about 0.5 to about 5 percent of a difunctional crosslinking agent, wherein said percentages being about weight based on the total weight of the mixture.

REMARKS

Reconsideration of the application in view of the foregoing amendments and following remarks is respectfully requested. The Examiner required correction of the specification at page 7 of the paragraph beginning at line 1. The paragraph has been amended as directed by the Examiner.

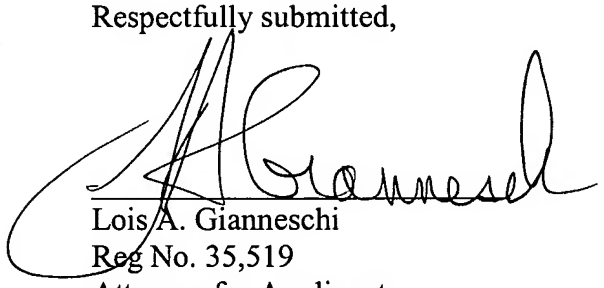
The Examiner rejected claims 1, 6, and 11 through 24 under U.S.C. § 102(b) as anticipated by Japanese Publication No. 02-018005. Additionally, the Examiner rejected

claims 2 through 4 under U.S.C. § 103(a) as unpatentable over the Japanese reference in view of United Stated Patent No. 4,831,094. Finally, the Examiner objected to claims 5, 7 through 10, 25 and 26 as being dependent on a rejected base claim.

Applicants hereby submit amended claims that overcome the Examiner's objections to the claims. Further, Applicants add new claims 27 through 35 that are believed also to be allowable.

Applicants submits that the claims, as amended, are in condition for allowance. Entry of the amendments, withdrawal of the rejection, and allowance of the claims are requested.

Respectfully submitted,



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